



**ALPHEUS COMMUNICATIONS, L.P.**

*Formerly known as  
El Paso Networks*



November 17, 2004

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12th Street, S.W.  
Washington, DC 20554

Re: WC Docket No. 04-313, CC Docket No. 01-338

Dear Ms. Dortch:

Some RBOCs have proposed that the Commission eliminate all unbundled access to dark fiber.<sup>1</sup> Alpheus Communications, L.P. (“Alpheus”) and segTEL Inc. (“segTEL”) oppose these proposals as over reaching and well beyond the mandates of *USTA II*. The RBOCs ask the Commission to discard the entire body of work and evidence the Commission, courts and states have accumulated regarding UNE dark fiber in order to disfranchise facilities-based competitors that have relied on state and federal precedent to invest scarce capital in good faith. This type of regulatory over-correction would – with absolute certainty – disfranchise wholesalers and other horizontal market participants who are pioneering the new world of genuine, sustainable competition in telecommunications. The Commission should instead adopt the impairment proposals offered by Alpheus and segTEL that limit access to dark fiber to where competitors remain impaired. In this letter we respond to certain claims made by the RBOCs in their reply comments that go beyond those Alpheus and segTEL already refuted in their Comments and/or Reply Comments. In addition, Alpheus and segTEL provide additional evidence supporting the impairment test advocated for dedicated transport and provide new information regarding the appropriate treatment of dark fiber loops.

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<sup>1</sup> See Verizon Reply Comments at pp.79-81; SBC Reply Comments at pp. 16-17.

**1. Having Relied on Dark Fiber to Eliminate OCn UNEs, the Commission Cannot Now Unduly Restrict Access to Dark Fiber; the Existence of Wholesale Markets is at Stake**

In the *TRO*,<sup>2</sup> the Commission based its non-impairment finding regarding enterprise market loops at the OCn capacity level in large measure on the fact that “competitive carriers requiring OC capacity ‘lit’ loops to serve customers will ... have the ability to purchase dark fiber, including unbundled dark fiber loops, and attach their own optronics to activate such loops to serve their customers at those locations where unbundled dark fiber is available.”<sup>3</sup> The Commission determined that CLECs were no longer impaired without “lit” elements, such as OCn transport or loops, because they would be able to deploy their own optronics and light dark fiber to replace their OCn UNEs. As a result of this finding, the Commission cannot eliminate dark fiber loops without reinstating OCn loops. Similarly, the Commission was able to severely limit the availability of lit DS3 loops to a maximum of two unbundled DS3 loops per carrier at each customer location, in part because carriers have the ability to purchase dark fiber and install optronics and multiplexing equipment at higher levels of TDM capacity, providing a viable facilities based transition away from unbundled high capacity lit services.<sup>4</sup>

The Commission further determined that dark fiber was a distinct product market that must be addressed separately from lit fiber UNEs because carriers make a significant investment to light dark fiber and the existence of “economic and operational characteristics that distinguish dark fiber from ‘lit’ fiber.”<sup>5</sup> The characteristics that distinguish the dark fiber market include the fact that dark fiber enables competing carriers to differentiate their services by offering services beyond TDM products, including GigE, managed wavelength and other innovative services, and because, as the Commission astutely observed, “dark fiber integrates more efficiently into their networks by reducing the number of failure points and by providing the competing carrier with greater ability to test for quality and for maintenance.”<sup>6</sup> Moreover, the Commission unanimously observed that “unbundled dark fiber users must deploy significant facilities, including optronic equipment and collocation in order to light the dark fiber” and determined that “this investment advances the facilities deployment goals of the Act.”<sup>7</sup> Hence, the Commission recognized in the *TRO* that access to unbundled dark fiber prompts facilities based competition and enables the evolution of a wholesale market in lit services.

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<sup>2</sup> *In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, CC Docket No. 01-338, 96-98, 98-147, 18 FCC Rcd 16,978, FCC 03-36 (rel. Aug. 21, 2003) (hereinafter “*TRO*”).

<sup>3</sup> *Id.* at ¶¶ 313, 315, 318.

<sup>4</sup> *Id.* at ¶ 313, 318.

<sup>5</sup> *Id.* at ¶ 311.

<sup>6</sup> *Id.* at ¶¶ 311-312, n.910, 383.

<sup>7</sup> *Id.* at ¶ 383.

**2. Unbundled Dark Fiber is the UNE That Best Fulfills the Core Purposes of the Act**

Of all UNEs, dark fiber best fulfills the core purposes of the Act. Dark fiber “uproots” monopoly markets to competition using unbundling, encourages facilities based investment in alternative networks and encourages the development of broadband. The preservation of dark fiber as a UNE promotes the Act’s fundamental purpose: creating sustainable facilities based competition where competitors provide innovative services, different from those offered by the ILEC, using technology that spawns additional investment and innovation. Not only does the utilization of unbundled dark fiber itself require competitive carriers to make a significant investment in collocated optronics to light the fiber, dark fiber is critical for migrating carriers from leased ILEC lit UNEs and for promoting the development of a vibrant wholesale market.<sup>8</sup> Moreover, by lighting dark fiber, rather than using lit UNEs, competitors can offer service differentiated from that of the incumbent LEC, such as the Gigabit Ethernet and Managed Wavelength services Alpheus provides its wholesale customers in Texas today.<sup>9</sup> Further, because Alpheus has deployed state of the art equipment in its network hubs it is able to provision cross connects at an optical level, a significant advance in efficiency over the manual and cumbersome electrical cross connects that are standard in the ILEC network.<sup>10</sup>

Further, UNE dark fiber entails a far smaller burden for the ILEC to provide than any lit services, because the ILEC need not provide multiplexing or network interface devices on either end of the facility. Since the UNE is simply the raw glass with no lit service guarantees, any improvement or use is solely a result of the CLEC’s investment. In essence, dark fiber is the least invasive of all elements for the ILEC to provide.

The lighting of unbundled dark fiber by competitive carriers is an efficient use of excess deployed fiber that is spare, and not deployed to accommodate demand for ILEC services. By lighting dark fiber, competitors are creating new capacity – not reselling ILEC capacity. Thus, in the *TRO* the Commission found that unbundling dark fiber “advances the facilities deployment goals of the Act” because use of ILEC dormant spare fiber “avoids unnecessary digging of streets” and requires dark fiber users to make substantial investments in optronics equipment and collocation.<sup>11</sup>

The collective body of work by the Commission and the courts on UNE dark fiber is valuable and has a sound basis in the record. This work should not be discarded without compelling reasons. *USTA II* does not require jettisoning this body of work. In fact, *USTA II* did

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<sup>8</sup> Comments of Alpheus Communications, L.P., at 3-7 (Oct. 4, 2004) (“*Alpheus Comments*”); *Alpheus Declaration*, at ¶¶ 6, 19, 23, 48, 58, 84, 90.

<sup>9</sup> *Alpheus Comments*, at 5-6; *Alpheus Declaration*, at ¶¶ 10, 17, 21-24. GigE services for example cannot be provided over “lit” UNEs available from the ILEC.

<sup>10</sup> *Alpheus Comments*, at 6; *Alpheus Declaration*, at ¶¶ 10-12.

<sup>11</sup> *TRO*, at 383.

not even address unbundled dark fiber loops.<sup>12</sup> Rather, *USTA II* for the most part merely precludes sub-delegating impairment decisions to the states.<sup>13</sup> *USTA II* does not diminish the important role dark fiber plays in the Commission's loop and transport unbundling regime. The *USTA II* court did not take issue with how the Commission employed UNE dark fiber in its unbundling framework, nor with the factual determinations the Commission reached in the *TRO* regarding the barriers to deploying fiber, or with the triggers the Commission used to determine impairment.<sup>14</sup>

Similarly, the availability of UNE dark fiber encourages the growth of broadband services. Carriers can use UNE dark fiber to provide Gigabit Ethernet services that enterprise customers are increasingly demanding in order satisfy their need for broadband. Dark Fiber is the only loop UNE that is not by its nature confined to TDM and as such can be used for new and innovative services both on a high bandwidth and on low bandwidth level. Some innovative low bandwidth applications of dark fiber include utilization of dark fiber in nodes for wireless access points to facilitate Wi-Fi and wireless VoIP. Further, new retail offerings, such as WiMAX, Broadband over Power Lines and even VoIP, need access to carrier and protocol agnostic competitive networks to sufficiently differentiate their innovative services from those offered by the incumbent providers. Leaving these new emerging technologies at the mercy of the ILEC (with the ILEC provisioning for these new entrants over the ILEC network for the new entrants to compete with the ILEC for customers) is a policy decision that will be fatally stifling to these otherwise promising technologies.

Importantly, the fact that there is an application that makes innovative use of UNE dark fiber does not necessarily mean that there is a revenue opportunity that correlates to the revenue that could be realized from providing OCn level services or even multiple DS3s. The need for dark fiber to provide a certain service does not, in and of itself, have any demonstrative effect towards proving the resources (such as revenue opportunities) necessary to self-deploy. segTEL, for instance uses UNE dark fiber loops to provide innovative broadband services such as public Wi-Fi access points in rural New England to customers who otherwise would not generate enough revenue to warrant self-deployment of fiber. Thus the availability of UNE dark fiber brings the benefit of fiber-based services to customers who otherwise do not and would not receive such services. In the case of these services, the loss of access to UNE dark fiber loops will not lead to a rise in self deployment, purchase of fiber from other sources (because there is none) or purchase of high capacity TDM UNE or access circuits, but instead will result in disconnection and existing innovative services will be shut down without any new service to be deployed in its place.

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<sup>12</sup> *United States Telecom Association v. Federal Communications Commission*, 359 F.3d 554, 573-578 (D.C. Cir. 2004) ("*USTA II*").

<sup>13</sup> *Id.* at 573-574.

<sup>14</sup> *Id.* at 574.

**3. ALTS' and Alpheus' Business Line Based Impairment Test for Dedicated Transport Appropriately Considers both Actual and Potential Deployment**

Alpheus and segTEL have provided the Commission with an impairment framework for dark fiber transport that is responsive to *USTA II*, and have provided significant evidence supporting the case for dark fiber transport impairment in comments and reply comments. Other CLECs have recently supplied the Commission with additional justification for using the approach Alpheus and segTEL propose and rejecting the RBOC call to eliminate dark fiber transport everywhere. The Conversent study demonstrates that the incumbents' proposed tests would remove far more dark fiber transport routes and locations from unbundling than the triggers adopted by this Commission in the *TRO* and grossly underestimate the scope of actual impairment for transmission facilities.<sup>15</sup> Conversent's study demonstrates in real world terms that the incumbent's proposals are grossly unreliable measures of impairment in the transport market, including dark fiber, and should therefore be rejected.<sup>16</sup>

In contrast to the incumbents' proposals, ALTS' and Alpheus' proposed thresholds have a significant impact in limiting the extent of the incumbent's unbundling obligations for dark fiber transport, but do not decimate competition. Alpheus has proposed a Three Tier Impairment Test for dedicated transport dark fiber. Under the Alpheus test there would be a finding of no impairment between wire centers each having more than 40,000 business access lines.<sup>17</sup> On routes between wire centers each having between 20,000 to 40,000 business access lines there would be a finding of impairment subject to the triggers previously established by the Commission in the *TRO*. Finally, on routes between wire centers below 20,000 business access lines there would be a national finding of impairment.<sup>18</sup> To provide context for the potential impact of this transport test on the markets Alpheus services in Dallas for example, wire centers with 40,000 or more business lines contain 58% of the business lines in Dallas. Further, wire centers between 20,000 and 40,000 business lines contain an additional 18% of the business lines in Dallas. Thus, wire centers that comprise up to 76% of the business lines in Dallas may be subject to non-impairment findings for UNE transport.<sup>19</sup>

The incumbents have touted that the presence of fiber-based collocators is a reliable indicator of the extent of facilities based competition in the transport market, including the market for unbundled dedicated dark fiber transport.<sup>20</sup> In any event, any impairment test that uses fiber-based collocators as a proxy for actual and potential competition in a market must use

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<sup>15</sup> Verizon Comments, at 82; Bell South Comments, at 39; SBC Comments, at 69-70.

<sup>16</sup> *Reply Comments of Conversent Communications, LLC*, at 9 (Oct. 19, 2004) ("*Conversent Reply Comments*").

<sup>17</sup> Alpheus, ALTS and segTEL transport impairment proposal were developed using business line estimates generated by PNR Associates for the Commission's Universal Service Proceeding.

<sup>18</sup> *Alpheus Ex Parte Presentation*, at 6 (Nov. 5, 2004) ("*Alpheus Presentation*"); Alpheus Reply Comments, at 6.

<sup>19</sup> *Alpheus Presentation*, at 7.

<sup>20</sup> *See, e.g.*, Bell South Comments, at 39-40.

the same collocators at both end points of the route for the analysis. Although it is unlikely that any of the collocators have actually connected the two end points on a given route to provide dedicated transport between Central Offices, the presence of paired collocators may suggest the potential to do so. On the other hand, the presence of different CLECs collocated on each end of a route, at best, sustains no inference regarding the route in question, and, at worst, proves that no one could efficiently deploy transport on the respective route.

#### **4. Finding Non-Impairment or Imposing a Dark Fiber Loop Capacity Test is Unlawful and Bad Policy**

A finding of non-impairment for dark fiber loops or imposition of a capacity test would be unlawful and overbroad because costs of deploying the outside plant for fiber loops increase dramatically as the length of the lateral from the competing carrier's fiber ring or other access point increases. Moreover, a non-impairment finding would be wholly inconsistent with the record and the Commission's conclusions in the *TRO*. In the *TRO*, the Commission unanimously supported the continued availability of unbundled access to dark fiber loops on a national basis. The Commission found impairment because the record made clear that competitive carriers faced enormous barriers to self-provisioning and there was scant evidence of competitive wholesale alternatives.<sup>21</sup> The Commission based its impairment finding regarding dark fiber in large part on the fact that the costs to construct loops are fixed and sunk. The Commission stated that "[b]ecause the distribution portion of the loop serves a specific location, and installing and rewiring that loop is very expensive, most of the costs of constructing loops are sunk costs."<sup>22</sup> The Commission concluded that it would be extremely difficult to recover these construction costs and be a viable competitor in the marketplace.

These factual conclusions remain unchanged and valid today and are buttressed by additional information introduced into the record. The principal cost driver for both fiber loop and transport construction remains the extremely high sunk cost of building new outside plant. These costs increase rapidly with the length of the transmission link from an access point on the competing carrier's fiber ring. In fact, AT&T's business case analysis demonstrates that a carrier that seeks to deploy a loop that will carry only 2 DS3s of traffic cannot possibly do so economically unless it – by chance – has a metropolitan fiber access point that is "no more than one city block (350 feet)" from the building to be served.<sup>23</sup> AT&T's analysis demonstrates that the Commission's previous capacity limits of 2 DS3s for loops, viewed in the best light, is "significantly *overpredictive* of non-impairment for competitors."<sup>24</sup> Thus, the farther a customer's building is from the competitor's existing fiber ring, the greater the sunk cost of deployment, and therefore the more incremental revenue the competitor must realize to justify any new facilities deployment. For these reasons alone the DS3 limits set in the *TRO* are very generous to the incumbents, because in most circumstances a carrier would need considerably

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<sup>21</sup> *TRO*, at ¶¶ 311, 313.

<sup>22</sup> *TRO* ¶ 205.

<sup>23</sup> *Comments of AT&T Corporation*, at 37 (Oct. 4, 2004) ("*AT&T Comments*").

<sup>24</sup> *Id.* at 38.

more than 2 DS3s to justify the costs of construction of loops.<sup>25</sup> Rather in most cases where DS3 loops are no longer available to a CLEC because of the cap, it is more likely that the CLEC would use UNE dark fiber combined with its own optronics to continue serving its customer. The Commission's conclusions in the *TRO* regarding dark fiber loops remains consistent with the unbundling guidance provided by the Supreme Court and D.C. Circuit which concluded that "entrants may need to share some facilities that are *very expensive to duplicate* (say, loop elements) in order to be able to compete in other, *more sensibly duplicable* elements (say, digital switches or signal-multiplexing technology)."<sup>26</sup>

In addition, the costs of loop deployment are not restricted to construction costs. The Commission concluded that CLECs often encounter "the inability to obtain reasonable and timely access to the customer's premises both in laying the fiber to the location and getting it into the building thereafter."<sup>27</sup> In fact, building access is a significant "first mover" advantage incumbents enjoy because of their legacy status as monopolies. For instance, the *TRO* found that incumbents have "first mover advantages," which includes preferential access to buildings, access to rights of way, and further noted that "while section 224 provides certain rights to requesting telecommunications carriers, the requesting carriers must still face costs inherent in exercising those rights – costs that the incumbent LEC does not face because it already has access to rights-of-way (for its existing network)."<sup>28</sup> The Commission can and should continue to include building access as a factor in its impairment analysis as the D.C. Circuit affirmed the consideration of such first mover advantages in the Commission's impairment test.<sup>29</sup> Indeed, any failure to consider all impairment criteria is, by definition, an incomplete analysis of impairment required by the Act.

Capacity restrictions deter innovation and create inefficiency. Continued availability of access to dark fiber loops allows carriers to make the natural transition to their own facilities based on long term revenue commitments from customers. Using their own facilities, carriers can seek efficient new ways to deliver customers the capacity they need. By confining carriers to artificial capacity levels the Commission condemns enterprise customers to resold incumbent service.

## **5. Alpheus' and segTEL's Alternative Dark Fiber Loop Impairment Approach**

As an alternative to the impairment approach that Alpheus set forth in its initial Comments and Reply Comments for dark fiber loops, the Commission should consider the following test. Alpheus proposes that there be a finding of non-impairment for dark fiber loops (a) where either two or more competitive carriers have self-deployed dark fiber to the end user

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<sup>25</sup> *Id.* at 27, 37-38 (The reality that loop construction costs increase rapidly with the length of the transmission link also explains "why the fact that one carrier serves a particular building cannot be dispositive as to whether it would be economic for another carrier to serve the same location at the same level of demand.").

<sup>26</sup> *USTA I*, at 426 citing *Verizon*, 535 U.S. 467, 510 n. 27 (2002). (emphasis in *USTA I*).

<sup>27</sup> *TRO*, ¶ 303.

<sup>28</sup> *Id.* ¶ 89 & n.293; see also *Id.* ¶¶ 303-306.

<sup>29</sup> *USTA II*, at 571-572.

customer's premises over their own facilities; or, (b) where the requesting competitive carrier has a splice point that it controls that is located within 500 feet of the end user customer's premises such that construction of a lateral to its own splice point has the potential to be economically feasible. Alpheus' proposed alternative test is reasonable in part because the test incorporates the self-provisioning trigger that the Commission established in the *TRO* for dark fiber loops.<sup>30</sup> Further, the second prong of Alpheus' alternative test addresses potential deployment and is reasonable based upon the substantial evidence in the record discussed above that the sunk costs of deploying fiber loops increases rapidly with the length of the transmission link from an access point on the competing carrier's fiber ring.<sup>31</sup> For example, AT&T's business case analysis demonstrates that a carrier that seeks to deploy a fiber loop that will carry only 2 DS3s of traffic cannot do so economically unless the carrier has a metropolitan fiber ring access point that is no more than one city block (about 350 feet) from the end-user customer premise to be served.<sup>32</sup> Thus Alpheus proposed test for dark fiber loop impairment is conservative and would require CLECs self deploy when they can construct a lateral of 500 feet or less.

This test is preferable to that proposed by the RBOCs which would simply eliminate all access to UNE dark fiber loops in every market. The loss of UNE dark fiber loops would severely damage deployment of services in non-urban areas. In many rural and semi-rural areas, UNE Dark Fiber is the only option for competitive provision of innovative broadband services. Eliminating access to UNE dark fiber loops in this case undermines the Commission's goals in implementing § 706 of the Act.

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<sup>30</sup> *TRO*, at ¶¶ 331-334.

<sup>31</sup> *AT&T Comments*, at 27, 30, 37.

<sup>32</sup> *AT&T Comments*, at 37-38 ("even under the most extreme favorable assumptions, a carrier could not economically deploy a loop to serve only 2 DS3s of demand unless the building were no more than one city block (350 feet) from the carrier's existing fiber").



Marlene H. Dortch, Secretary

November 17, 2004

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Respectfully Submitted,

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